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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/058,035	01/29/2002	Toshihiro Takagi	3064IT/50894	2682

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EXAMINER
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HOSSAIN, FARZANA E

ART UNIT	PAPER NUMBER
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2623

DATE MAILED: 05/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/058,035

Applicant(s)

TAKAGI ET AL.

Examiner

Farzana E. Hossain

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 January 2002.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-4 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 29 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4-25-02.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Channel Selection Device for Use in a Digital/Analog Broadcasting Receiver for Reception of Main and Sub Channels

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shintani et al (US 6,661,472 and hereafter referred to as "Shintani) in view of Kim et al (US 2001/0052124 and hereafter referred to as "Kim")

Regarding Claim 1, Shintani discloses a channel selection device or remote control (Figure 1B, 100) used in a digital/analog broadcasting receiver or digital television (Figure 1B, 150) comprising,

a receiver or television (TV) for receiving an encoded digital/analog broadcasting signal (Figure 1B, 150, 160) originated from a broadcasting station or a source as it is necessarily included that a source broadcast the signal to the receiver,

a digital/analog decoder or channel processing circuit (Figure 1B, 170) for decoding the digital/analog broadcasting signal (Column 4, lines 31-43) received from the receiver (Figure 1B, 150, 160) and then outputting the signal to a display device for displaying an image (Figure 1, 155, Column 4, lines 42-43),

a memory or channel look up table (Figure 1B, 175) for storing channel information contained in the broadcasting signal decoded by the digital decoder or channel processing circuit (Column 4, lines 8-23),

a control unit or channel control circuit (Figure 1B, 165) for controlling the sections of the receiver (Figure 1B, 165), and

an input device or remote control (Figure 1B, 100) for inputting a user's instruction for channel selection to the control unit (Column 3, lines 62-67), wherein the device receives a digital broadcast and an analog broadcast which are originated through different channels (Column 4, lines 1-7), the digital broadcast has, in one main or major channel, one or a plurality of sub-channels or minor channels for originating contents (Column 4, lines 1-7) therethrough, the sub-channels are assigned virtual channels headed by the same channel number as the main channel in the analog broadcast (Column 2, lines 46-65) and

the control unit controls the device such that the receiver receives the broadcasting signal of a selected channel upon reception of the channel selection

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instruction from the input device (Figure 3, 300, 305, Column 5, lines 64-65, Column 6, lines 1-8, Figure 5, 500, 502) and the digital decoder or channel processing circuit decodes the received broadcasting signal (Figure 5, 520), in order to obtain the channel information contained in the decoded broadcasting signal and then store the channel information in the memory (Column 7, lines 1-5); characterized in that, the input device includes an UP/DOWN key (Figure 1, 120). Shintani discloses the ability to use the UP/Down key for selecting the next channel which includes next major and minor channel by checking the memory or look up table when receiving instruction (Column 6, lines 9-20).

Shintani is silent on the input device includes an UP/DOWN key for instructing the control unit to select a sub-channel adjacent in upward/downward direction in the same main channel, the control unit references the channel information to thereby select an upward/downward adjacent sub-channel in the main channel through which a broadcast is being received currently, each time the UP/DOWN key is operated; selects a sub-channel having the largest sub-channel number, when receiving the instruction by the UP key and not finding an upward adjacent channel in the main channel with reference to the channel information, selects a sub-channel having the smallest sub-channel number, when receiving the instruction by the DOWN key and not finding a downward adjacent channel in the main channel with reference to the channel information.

Kim discloses a digital television that receives encoded analog or digital data (Figure 1, 100, 102) and a control unit or microprocessor (Figures 1, 2, 124) processes

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the broadcast to display on the display device via a remote control or input device for a main or major channel with a sub or minor channel (Page 2, paragraph 0029). Kim discloses EPG or electronic program guide information stored (Page 1, paragraph 0005). Kim discloses that the channels for major and minor channels are part of the EPG information (Page 2, paragraph 0025). Kim discloses that the input device includes an UP/DOWN key for instructing the control unit to select a sub-channel adjacent in upward/downward direction in the same main channel (Page 3, paragraph 0040), the control unit or microprocessor references the channel information provided by the decoder (Figure 1, 108) to thereby select an upward/downward adjacent sub-channel in the main channel through which a broadcast is being received currently, each time the UP/DOWN key is operated (Page 3, paragraph 0040); selects a sub-channel having the largest sub-channel number, when receiving the instruction by the UP key and not finding an upward adjacent channel in the main channel with reference to the channel information or choosing the program of higher number minor channel when the channel up key is pressed (Figure 3, paragraph 0041), selects a sub-channel having the smallest sub-channel number, when receiving the instruction by the DOWN key and not finding a downward adjacent channel in the main channel with reference to the channel information or choosing a program of lowest minor or sub channel when pressing the down key (Pages 3-4, paragraph 0042).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Shintani so that the input device includes an UP/DOWN key for instructing the control unit to select a sub-channel adjacent in

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upward/downward direction in the same main channel (Page 3, paragraph 0040), the control unit or microprocessor references the channel information provided by the decoder (Figure 1, 108) to thereby select an upward/downward adjacent sub-channel in the main channel through which a broadcast is being received currently, each time the UP/DOWN key is operated (Page 3, paragraph 0040); selects a sub-channel having the largest sub-channel number, when receiving the instruction by the UP key and not finding an upward adjacent channel in the main channel with reference to the channel information or choosing the a program of higher number minor channel when the channel up key is pressed (Figure 3, paragraph 0041), selects a sub-channel having the smallest sub-channel number, when receiving the instruction by the DOWN key and not finding a downward adjacent channel in the main channel with reference to the channel information or choosing a program of lowest minor or sub channel when pressing the down key(Pages 3-4, paragraph 0042) as taught by Kim in order to provide a user to easily select programs when there are several programs per major channel (Page 1, paragraph 0006) as disclosed by Kim.

Regarding Claim 2, Shintani discloses a channel selection device or remote control (Figure 1B, 100) used in a digital/analog broadcasting receiver or digital television (Figure 1B, 150) comprising,

a receiver or television (TV) for receiving an encoded digital/analog broadcasting signal (Figure 1B, 150, 160) originated from a broadcasting station or a source as it is necessarily included that a source broadcast the signal to the receiver,

a digital/analog decoder or channel processing circuit (Figure 1B, 170) for decoding the digital/analog broadcasting signal (Column 4, lines 31-43) received from the receiver (Figure 1B, 150, 160) and then outputting the signal to a display device for displaying an image (Figure 1, 155, Column 4, lines 42-43),

a memory or channel look up table (Figure 1B, 175) for storing channel information contained in the broadcasting signal decoded by the digital decoder or channel processing circuit (Column 4, lines 8-23),

a control unit or channel control circuit (Figure 1B, 165) for controlling the sections of the receiver (Figure 1B, 165), and

an input device or remote control (Figure 1B, 100) for inputting a user's instruction for channel selection to the control unit (Column 3, lines 62-67), wherein the device receives a digital broadcast and an analog broadcast which are originated through different channels (Column 4, lines 1-7), the digital broadcast has, in one main or major channel, one or a plurality of sub-channels or minor channels for originating contents (Column 4, lines 1-7) therethrough, the sub-channels are assigned virtual channels headed by the same channel number as the main channel in the analog broadcast (Column 2, lines 46-65) and

the control unit controls the device such that the receiver receives the broadcasting signal of a selected channel upon reception of the channel selection instruction from the input device (Figure 3, 300, 305, Column 5, lines 64-65, Column 6, lines 1-8, Figure 5, 500, 502) and the digital decoder or channel processing circuit decodes the received broadcasting signal (Figure 5, 520), in order to obtain the channel



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information contained in the decoded broadcasting signal and then store the channel information in the memory (Column 7, lines 1-5); characterized in that, the input device includes an UP/DOWN key (Figure 1, 120). Shintani discloses the ability to use the UP/Down key for selecting the next channel which includes next major and minor channel by checking the memory or look up table when receiving instruction (Column 6, lines 9-20).

Shintani is silent on the input device includes an operation key for instructing the control unit to select a sub-channel adjacent in upward/downward direction in the same main channel, the control unit references the channel information to thereby select an upward/downward adjacent sub-channel in the main channel through which a broadcast is being received currently, each time the operation key is operated; selects a sub-channel having the largest sub-channel number, when receiving the instruction by the UP key and not finding an upward adjacent channel in the main channel with reference to the channel information, selects a sub-channel having the smallest sub-channel number, when receiving the instruction by the DOWN key and not finding a downward adjacent channel in the main channel with reference to the channel information.

Kim discloses a digital television that receives encoded analog or digital data (Figure 1, 100, 102) and a control unit or microprocessor (Figures 1, 2, 124) processes the broadcast to display on the display device via a remote control or input device for a main or major channel with a sub or minor channel (Page 2, pargrah 0029). Kim discloses EPG or electronic program guide information stored (Page 1, paragraph 0005). Kim discloses that the channels for major and minor channels are part of the

EPG information (Page 2, paragraph 0025). Kim discloses that the input device includes an operation key for instructing the control unit to select a sub-channel adjacent in upward/downward direction in the same main channel (Page 3, paragraph 0040), the control unit or microprocessor references the channel information provided by the decoder (Figure 1, 108) to thereby select an upward/downward adjacent sub-channel in the main channel through which a broadcast is being received currently, each time the operation key is operated (Pages 3-4, paragraph 0040-0042); the control unit searches the main channel in reception currently in circulation or reciprocation or searches what the next highest or lowest channel should be and searches the main channel in circulation for the sub-channel to be selected when there is not the upward/downward adjacent sub channel in the channel information (Pages 3-4, paragraph 0041-0042).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Shintani so that the input device includes an operation key for instructing the control unit to select a sub-channel adjacent in upward/downward direction in the same main channel (Page 3, paragraph 0040), the control unit or microprocessor references the channel information provided by the decoder (Figure 1, 108) to thereby select an upward/downward adjacent sub-channel in the main channel through which a broadcast is being received currently, each time the operation key is operated (Pages 3-4, paragraph 0040-0042); the control unit searches the main channel in reception currently in circulation or reciprocation or searches what the next highest or lowest channel should be and searches the main channel in

circulation for the sub-channel to be selected when there is not the upward/downward adjacent sub channel in the channel information (Pages 3-4, paragraph 0041-0042) as taught by Kim in order to provide a user to easily select programs when there are several programs per major channel (Page 1, paragraph 0006) as disclosed by Kim.

Regarding Claim 3, Shintani and Kim disclose all the limitations of Claim 2. Shintani discloses storing channel information in the channel lookup table (Figure 1, 175). Kim discloses EPG or electronic program guide information stored (Page 1, paragraph 0005). Kim discloses that the channels for major and minor channels are part of the EPG information (Page 2, paragraph 0025). Kim discloses comprising an OSD (On-Screen Display) output circuit or video processor/generator for providing OSD display of a list of the channel information stored in the memory in such a state that the digital and analog broadcasts thereof are mixed, on the display device wherein the list of the channel information is displayed in a vertically (Figure 5A, Figure 5B)/horizontally (Figure 3) arranged state in order of channel number, and a cursor for selecting the channels as interlocked with the instruction by use of the operation key is indicated in the list of the channels displayed on the display device in an OSD manner (Figure 3, Page 2, paragraph 0030, Figure 5A, Figure 8, Figure 9A, 9B, Pages 4-5, paragraph 0052-0054).

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shintani in view of Kim as applied to claim 2 above, and further in view of Eyer (US 6,483,547).

Regarding Claim 4, Shintani and Kim disclose all the limitations of Claim 2. Shintani discloses receiving a digital broadcast according to the ATSC (Advanced Television Systems Committee) standard (Column 2, lines 36-38). Shintani and Kim are silent on receiving an analog broadcast according to the NTSC (National Television Systems Committee) Standard. Eyer discloses a system that receives analog broadcasts and digital broadcasts for major and minor channels (Column 4, lines 22-35). Eyer discloses receiving an analog broadcast according to the NTSC (National Television Systems Committee) Standard (Column 6, lines 18-24). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Shintani in view of Kim to receive an analog broadcast according to the NTSC Standard (Column 6, lines 18-24) as taught by Eyer so that analog broadcasts conform to one standard.

### ***Double Patenting***

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated

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by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Omum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claim 1 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/053,613 (soon to be U.S. Patent No. 7050117). Although the conflicting claims are not identical, they are not patentably distinct from each other because they are broader in scope and therefore would unduly extend the time wise monopoly afforded to the other claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

7. Claim 1 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of Application No. 10/053,613 (soon to be U.S. Patent No. 7050117) in view of Kim.

The following limitations are differences in the claim limitations for the two applications.

The instant application's limitations of selects a sub-channel having the smallest sub-channel number, when receiving the instruction by the DOWN key" is met by the limitations "the control unit select the smallest channel number of the sub channel form among the digital one if the main channel contains a plurality of sub-channels, in channel changing on the basis of the changing instruction from the input device" of Application No. 10/053,613 (soon to be U.S. Patent No. 7,050,117).

The instant application is missing the limitation of "the input device has UP/DOWN keys assigned for sub-channel switch over and RIGHT/LEFT keys assigned for main channel switch over." It would be obvious to include the features in the instant application as sub-channel switch over allows for changing sub channels. It would be obvious to modify Application No. 10/053,613 (soon to be U.S. Patent No. 7,050,117) to make the claim broader.

The instant application's limitation "the input device includes an UP/DOWN key for instructing the control unit to select a sub-channel adjacent in upward/downward

direction in the same main channel, the control unit references the channel information to thereby select an upward/downward adjacent sub-channel in the main channel through which a broadcast is being received currently, each time the UP/DOWN key is operated; selects a sub-channel having the largest sub-channel number, when receiving the instruction by the UP key and not finding an upward adjacent channel in the main channel with reference to the channel information" are additional features.

It would be obvious to include the limitations in Application No. 10/053,613 (soon to be U.S. Patent No. 7,050,117) as they are disclosed by the prior art. Kim discloses that the input device includes an UP/DOWN key for instructing the control unit to select a sub-channel adjacent in upward/downward direction in the same main channel (Page 3, paragraph 0040), the control unit or microprocessor references the channel information provided by the decoder (Figure 1, 108) to thereby select an upward/downward adjacent sub-channel in the main channel through which a broadcast is being received currently, each time the UP/DOWN key is operated (Page 3, paragraph 0040); selects a sub-channel having the largest sub-channel number, when receiving the instruction by the UP key and not finding an upward adjacent channel in the main channel with reference to the channel information or choosing the program of higher number minor channel when the channel up key is pressed (Figure 3, paragraph 0041), selects a sub-channel having the smallest sub-channel number, when receiving the instruction by the DOWN key and not finding a downward adjacent channel in the main channel with reference to the channel information or choosing a program of lowest minor or sub channel when pressing the down key(Pages 3-4, paragraph 0042).

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sugiyama (US 6,313,886).

Sugiyama discloses a channel selection device (Figure 4, 422) used in a digital/analog broadcasting receiver (Figure 4, 400) comprising, a receiver or television (TV) for receiving an encoded digital/analog broadcasting signal (Figure 4, 400, 404) originated from a broadcasting station or a source as it is necessarily included that a source broadcast the signal to the receiver, a digital (Figure 4, 414, 416) and/or analog (Figure 4, 413, 415) decoder for decoding the digital/analog broadcasting signal (Figure 4, 413, 415, 414, 416) received from the receiver (Figure 1, 404) and then outputting the signal to a display device for displaying an image (Figure 1, 418).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Farzana E. Hossain whose telephone number is 571-272-5943. The examiner can normally be reached on Monday to Friday 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Grant can be reached on 571-272-7294. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

FEH  
May 8, 20006

A handwritten signature in black ink, consisting of several overlapping, fluid strokes that form a cursive-like shape, likely representing the name Vivek Srivastava.

**VIVEK SRIVASTAVA**  
**PRIMARY EXAMINER**